Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in this application:

Listing of Claims:

Claim 1 (currently amended): A method for monitoring and controlling a microscope, comprising the following steps:

    a) ascertaining the information content of at least one image;

    b) analyzing the information content using a specified target information content and a specified variation of the information content as the tolerance dimension;

    c) determining a control variable from the analysis of the information content, using a predetermined target value for influencing the information content;

    d) transferring the control variable to at least one non-scanning actuator of the microscope; and

    e) outputting a warning signal in the event of variations of the information content beyond the tolerance dimension.

Claim 2 (currently amended): The method as defined in Claim 1, wherein depending on the result of the analysis of the information content, several different control variables and non-scanning actuators of the microscope are determined and activated.

Claim 3 (original): The method as defined in Claim 1, wherein the method for monitoring and controlling the microscope is initiated by a user.

Claim 4 (original): The method as defined in Claim 3, wherein the method is started by the user by means of a switch.

Claim 5 (original): The method as defined in Claim 1, wherein the microscope is embodied as a scanning microscope.

Claim 6 (currently amended): An arrangement for monitoring and controlling a microscope, comprising:

a detector unit for acquiring at least one image,

at least one input port for a control variable,

a computer system associated with the microscope, wherein the information content of the at least one image can be ascertained using the detector unit and the computer system; the computer system analyzes the information content using a specified target information content and a specified variation of the information content as the tolerance dimension, and determines a control variable therefrom; from the analysis of the information content, using a predetermined target value for influencing the information content; and

at least one non-scanning actuator associated with the microscope, wherein the actuator converts the control variable allocated to the actuator into a change in the information content of

the image within a tolerance dimension.

Claim 7 (original): The arrangement as defined in Claim 6, wherein a means for outputting a warning signal is provided, which means makes a warning signal available to the user if the variations in the information content lie outside the tolerance dimension.

Claim 8 (currently amended): The arrangement as defined in Claim 6, wherein several non-scanning actuators are associated with the microscope, each of which receives a different control variable.

Claim 9 (original): The arrangement as defined in Claim 6, wherein a switch is provided with which a user initiates the automatic monitoring of the microscope.

Claim 10 (original): The arrangement as defined in Claim 6, wherein the switch is embodied as a click button on a display associated with the computer system.

Claim 11 (original): The arrangement as defined in Claim 6, wherein the microscope is embodied as a scanning microscope.

Claim 12 (currently amended): ~~Software on a data~~ A computer-usable medium~~, wherein a~~ storing computer-usable program code for computer system connected to a microscope ~~carries~~ carrying out a method comprising the steps:

    a) ascertaining the information content of at least one image;

    b) analyzing the information content using a specified target information content and a specified variation of the information content as the tolerance dimension;

    c) determining a control variable from the analysis of the information content, using a predetermined target value for influencing the information content;

    d) transferring the control variable to at least one non-scanning actuator of the microscope; and

    e) outputting a warning signal in the event of variations of the information content beyond the tolerance dimension.

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